HELP!!

WE NEED MORE
TRANSLATORS
FOR THIS PROJECT

PLEASE APPLY AT
HTTP://WINGTIPCAFE.COM/EN

動物のお医者さん

MICROBIOLOGY LABORATORY
I ONLY SEE A PALE YELLOW LIQUID
Really
There should be two types of bacteria in the test tube
Staphylococcus and an unknown X.
X
Hamutaru and the other students' mission is to to find out what the unknown bacteria X is
Instead of a microbiology exam, a bacteria isolation test is conducted.
Sigh
Sigh

T/N SF=Science Fiction

That's more like SF

THAT'S RIGHT! THE ENDING IS UNKNOWN WHO KNOWS WHAT WE WILL DISCOVER

You have to analyze the situation,

gather the evidence,

then find the criminal (Bacteria X).

I FEEL THAT THIS BACTERIA ISOLATION TEST IS VERY MUCH LIKE A DETECTIVE NOVEL.

Mr Ramson is able to deduce everything about the bacteria, from its functions to its origins

Based on its color, shape, size and clustering properties,

Could be this...

or maybe this.

In fact, an expert would be able to determine what Bacteria X is just by observing it under the microscope

Expert

↓ (microbiology teacher)

T/N A Gram stain is a test which distinguishes different types of bacteria

Steps taken for bacteria isolation

You take a bacterial sample and observe it under the microscope after performing a Gram stain*

Staphylococcus look like this,

Clusters of Staphylococcus bacteria

There's another type of bacteria in the mixture so it looks like this under the microscope

Or like this

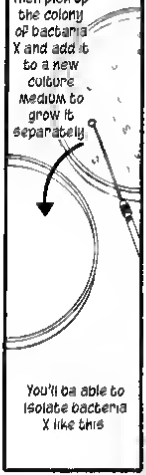
It depends on what sample you get because there is more than one type of bacterial mixture.

Bacteria isolation assistant group

But Mamoteru and the others can only see traces of the unknown bacteria. They have to culture (multiply) the bacteria they have first.

However, for the assistant group members, this is not as simple as it sounds.

Then pick up the colony of bacteria X and add it to a new culture medium to grow it separately.



You'll be able to isolate bacteria X like this.

EE-YAAH!

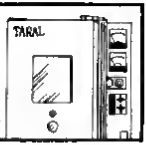
Steps taken for bacteria isolation continued...

First, you streak a drop of the mixed bacterial sample on an agar plate.

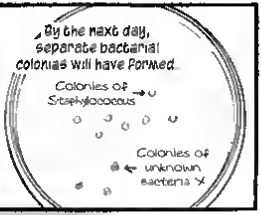
You use tools like an inoculating loop for this.

Let it incubate overnight without disturbance.

You place it in an incubator →

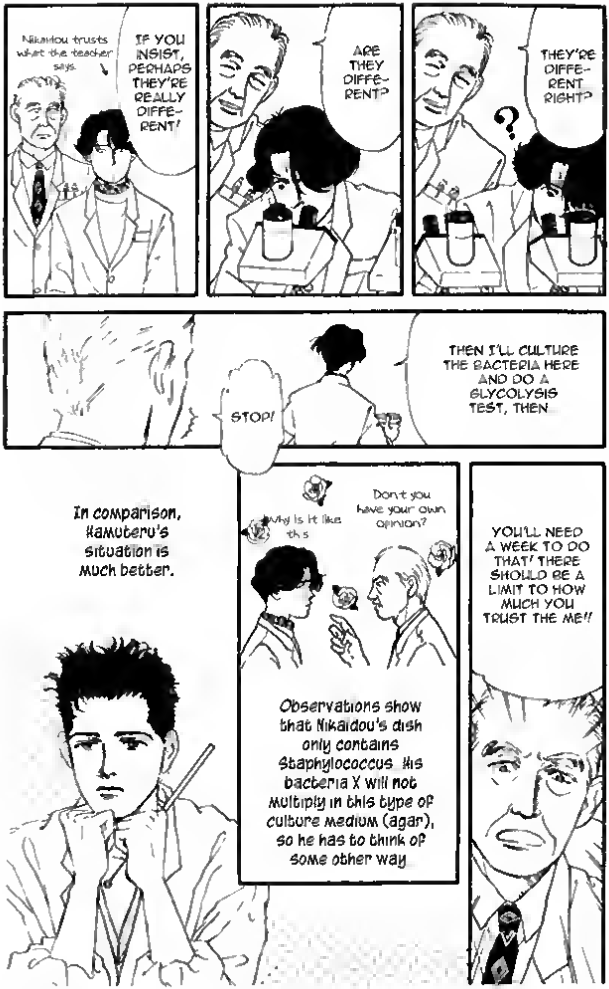


By the next day, separate bacterial colonies will have formed.



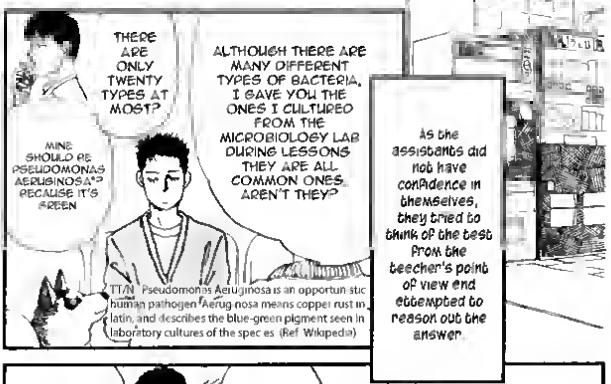
T/N: Streaking is where the bacterial sample is added in a zig zag fashion. An agar plate is a sterilized plate with a culture medium (agar jelly)

I THINK THERE SHOULD ONLY BE ONE COLOR
WHY IS IT THAT ONLY MINE ARE SUCH A WEIRD COLOR?
↓ GREEN
SPLOSH!
THEY'VE SPREAD OUT ALL OVER THE PLATE. I CAN'T FIND ANY DISTINCT COLONIES
.....
This was was the opinion of every member of the assistant group
No matter how conscientious they were, it seemed impossible for them to complete the task within two weeks.
SEEMS LIKE BOTH ARE STAPHYLO-COCCUS
EXTRACT THIS AND THIS, AND OBSERVE UNDER THE MICRO-SCOPE!
Of course, the teacher does drop some hints occasionally
TEACHER, MINE IS STREPTO-COCCUS, RIGHT?
TEACHER, PLEASE GIVE ME A HINT!
WHAT SHOULD I DO NEXT?


Nikaidou trusts what the teacher says.
IF YOU INSIST, PERHAPS THEY'RE REALLY DIFFE-RENT!
ARE THEY DIFFE-RENT?
THEY'RE DIFFE-RENT RIGHT?
?
THEN I'LL CULTURE THE BACTERIA HERE AND DO A GLYCOLYSIS TEST, THEN
STOP!
Why is it like this
Don't you have your own opinion?
YOU'LL NEED A WEEK TO DO THAT! THERE SHOULD BE A LIMIT TO HOW MUCH YOU TRUST THE ME!!
In comparison, Kamuteru's situation is much better.
Observations show that Nikaidou's dish only contains Staphylococcus. His bacteria X will not multiply in this type of culture medium (agar), so he has to think of some other way

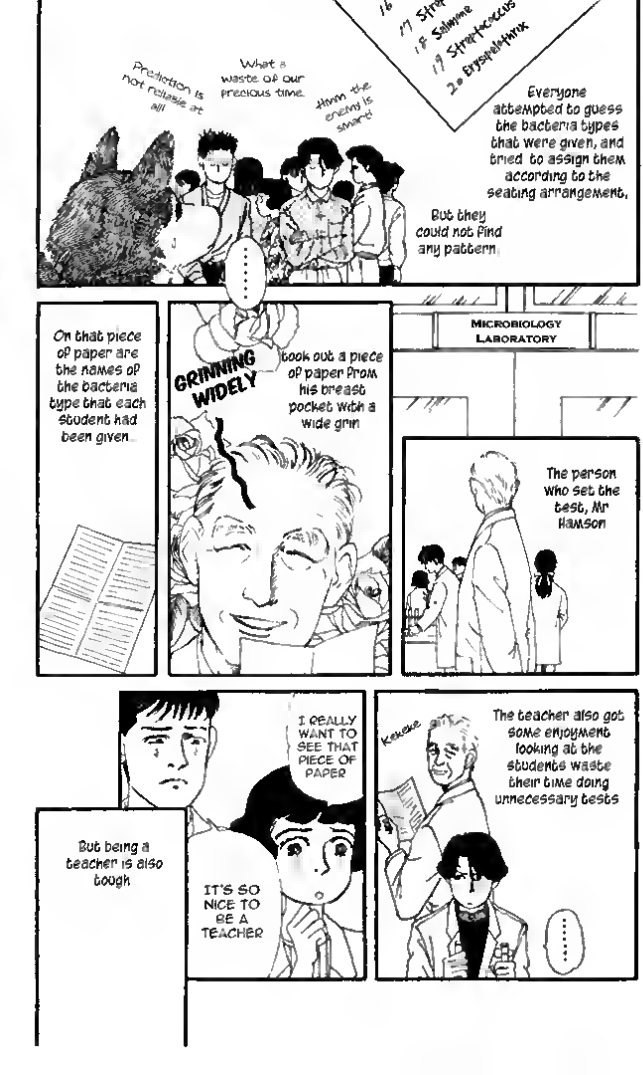
He's still not done?
Although there's only one last step
After this, he just needs to do certain tests to identify bacterie X
CHOBI IS NOT ALLOWED TO ENTER BECAUSE OF CONTAMINATION FEARS.

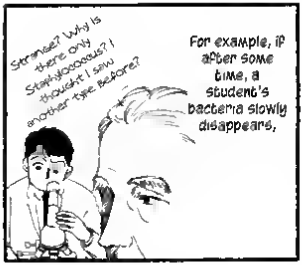
He also could not culture the unknown bacteria in the agar, but he thought of another way immediately, and managed to grow it in isolation.
No matter how many times I do it, they still spread all over. I can't get any separate colonies at all.
I'm envious

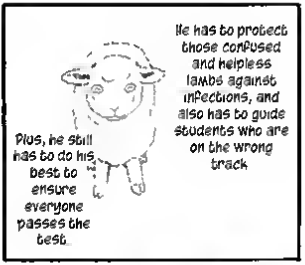

THERE ARE ONLY TWENTY TYPES AT MOST?
ALTHOUGH THERE ARE MANY DIFFERENT TYPES OF BACTERIA, I GAVE YOU THE ONES I CULTURED FROM THE MICROBIOLOGY LAB DURING LESSONS. THEY ARE ALL COMMON ONES, AREN'T THEY?
MINE SHOULD BE PSEUDOMONAS AERUGINOSA? BECAUSE IT'S GREEN
As the assistants did not have confidence in themselves, they tried to think of the best from the teacher's point of view and attempted to reason out the answer.

TN: Pseudomonas Aeruginosa is an opportunistic human pathogen. Aerugnosa means copper rust in latin, and describes the blue-green pigment seen in laboratory cultures of the species. (Ref: Wikipedia)

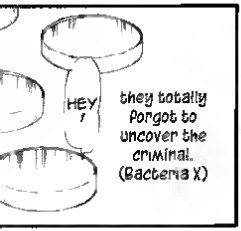
DID THE TEACHER ASSIGN THEM ACCORDING TO THE SEATING ARRANGEMENT?
BUT YOU WON'T KNOW WHO HAS THE SAME BACTERIA AS YOU
IF THAT'S THE CASE, IT'LL BE EASIER IF WE DO IT TOGETHER!
THERE ARE 40 STUDENTS IN ALL, SO THERE HAS TO BE ONE OR TWO WHO HAVE THE SAME BACTERIA THAT I DO


16
17 Strep
18 Salmine
19 Streptococcus
20 Staphylococcus
Everyone attempted to guess the bacteria types that were given, and tried to assign them according to the seating arrangement.
But they could not find any pattern
Prediction is not reliable at all!
What a waste of our precious time.
Hmm the enemy is smart!
MICROBIOLOGY LABORATORY
The person who set the test, Mr Hamson
GRINNING WIDELY
took out a piece of paper from his breast pocket with a wide grin
On that piece of paper are the names of the bacteria type that each student had been given.
I REALLY WANT TO SEE THAT PIECE OF PAPER
IT'S SO NICE TO BE A TEACHER
But being a teacher is also tough
Kekeke
The teacher also got some enjoyment looking at the students waste their time doing unnecessary tests


Strange? Why is there only Staphylococcus? I thought I saw another type before?
For example, if after some time, a student's bacteria slowly disappears,


He has to protect those confused and helpless lambs against infections, and also has to guide students who are on the wrong track
Plus, he still has to do his best to ensure everyone passes the test.

As they spent all their time trying to persuade the teacher to give hints,



Whether it's kindness or not, or if he's an elf or a demon,

the students took many pains to try to extract hints from him.

THAT'S BECAUSE OF CONTAMINATION FROM BACTERIA IN THE AIR. YOUR METHODS TO ENSURE STERILE CONDITIONS FOR TESTING ARE LOUSY
WHAT
HAMUTERU'S BETTER OFF. I ACTUALLY HAVE 4 TYPES OF BACTERIA IN MY SAMPLE
PLAYING AROUND WITH THE CHROMOSOME DYE LIKE THIS. THEY'LL GET IT WHEN THEY HAVE TO WASH THE TEST TUBES LATER!
pretty color
THE RESULT OF MIXING DIFFERENT TESTS TOGETHER
Why do you say that. then what is considered good?
Start all over again from the beginning
SHATTER
THE BACTERIA ARE ALL OVER THE FLOOR!
Quickly used sanitizer to clean it
If the teacher sees this, we'll definitely be punished
RIGHT
EVEN WITHOUT THE ANSWER KEY, THE TEACHER HAS TO KNOW WHICH BACTERIA EACH STUDENT HAS BEEN GIVEN
WE STILL DON'T KNOW?
THEY SHOULD BE HARMLESS BACTERIA!
WHAT BACTERIA TYPE IS IT?

OKAY! YOU COMPLETE YOUR PART FAST, AND WE'LL HELP YOU LATER.
I SUPPOSE SO! BUT I ALSO CAN'T GUESS WHAT THE BACTERIA IS...
PERHAPS IT'S A LISTERIA SPECIES? OR BACILLUS CEREUS?
HAMUTERU, YOU PROBABLY HAVE THE MOST PROGRESS OF ALL OF US!
I'M FINE WITH THIS...
A flame is used to sterilize the inoculating loop before use.
BURN
AH!

IT'S HOT
SHATTER
SORRY!
NISHINE MASAKI'S BACTERIA IS
BRING THE CRESOL AND GLOVES OVER HERE!

Gloves.

COME ON!

IS THAT BACTERIA DANGEROUS?

Cresol solutions are used as house hold cleaners and disinfectants. Known as Kresol in German (Ref Wik pedia))

Cresol*

KRESOL

IS ANYONE OF YOU HURT?!

USE DISINFECTANT TO WASH YOUR HANDS!

THIS THIS IS

JUST LEAVE IT, DO NOT TOUCH IT AT ALL BEFORE TOMORROW!!

THOROUGHLY WIPED CLEAN

EH? SUCH A LONG TIME?

DON'T TELL ME THE BACTERIA IS

Although to infer this from the teacher's handling of the accident is not a bad way of doing things, if they inferred correctly, it would lead to various serious consequences
Look! The burn mark made by the loop!
You didn't have to really burn me like that
Sorry! Was it very hot?
EH
CLOSTRIDIUM TETANI !!
TOO DANGEROUS
I DIDN'T EXPECT TO GET SUCH A DANGEROUS BACTERIA I HOPE I DON'T GET ANY ON MY CLOTHES OR THINGS AND BRING IT HOME WITH ME..
GRANDMOTHER IS VERY STRONG, SO THERE SHOULD BE NO PROBLEM, BUT CHOBI
CHOBI, I'M NOT PLAYING WITH YOU FOR THE TIME BEING!
What
Clostridium tetani* is spread through exposed wounds, it infects all animals and can be fatal too

*T/N: It causes tetanus!

I DIDN'T EXPECT HE'D GIVE US CLOSTRIDIUM TETANI
WE HAVE TO MAKE SURE WE GET THE NAMES OF ALL THE POSSIBLE TYPES OF BACTERIA!
THEN MINE ISN'T NECESSARILY PSEUDOMONAS AERUGINOSA - WHAT OTHER TYPE OF BACTERIA IS GREEN?
THERE'S ONLY ONE WEEK LEFT, IT'S SUCH A HEADACHE!
WAH—— WHAT SHOULD WE DO?
I'VE CONFIRMED IT
IT'S NOT CLOSTRIDIUM TETANI!
After Hamuteru's confirmation test..
HAMUTERU, HURRY UP AND HELP!
Yes! Yes!
Since they have guessed that Masaki's bacteria is Clostridium tetani, he just needs to confirm that this is true..
IT'S NOT CLOSTRIDIUM TETANI!?
HAHAHA YOU'VE BEEN FOOLED BY ME!

The true expert is still Mr Hamson.
HOW COULD I HAVE LET YOU COME INTO CONTACT WITH SUCH A DANGEROUS BACTERIA! YOUR INFERENCE SKILLS ARE SO POOR!
Actinia skills too.
SO... YOU WERE JUST PRETENDING?
I'd better treat mine as Pseudomonas Aeruginosa!
Everyone was back to square one. During the four days, they carried out experiments with a do-or-die attitude...
There are still four days left before the deadline
It was bifidobacteria, a probiotic!
Play with me!
Hamuteru's bacteria was not Clostridium tetani.
Sigh
Sigh
Everyone submitted their reports at the last minute.
Sigh
Sigh
and barely managed to pass.

T/N Bifidobacteria is a bacter a type that resides in the colon and aids with digestion. It is a probiotic used in the food industry to relieve and treat intestinal disorders. Probiotics are microorganisms that contribute to the health of the host organism. (Ref: Wikipedia)

Doubutsu no Oishasan

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